

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent application

Inventor(s)

for

Title of invention

the specification of which is being transmitted herewith

OR

In re application of: CARTELLA, Pietro

Application No.: 10 / 658,784 Group No.: 3612

Filed: September 9, 2003 Examiner:

For: STRUCTURE FOR THE FRONT OF A VEHICLE, OF THE TYPE WITH  
CONTROL OF THE DEFORMATION FOR THE SAFEGUARD OF THE  
PEDESTRIANAssistant Commissioner for Patents  
Washington, D.C. 20231

## INFORMATION DISCLOSURE STATEMENT

## CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10\*

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"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will **not** be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

(Information Disclosure Statement [6-1]—page 1 of \_\_\_\_\_)

NOTE: "An information disclosure statement shall be considered by the Office if filed by the applicant:

- (1) Within three months of the filing date of a national application;
  - (2) Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application; or
  - (3) Before the mailing date of a first Office action on the merits, whichever event occurs last."
- 37 C.F.R. § 1.97(b).

NOTE: "Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section." 37 C.F.R. § 1.56(a).

"Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) each inventor named in the application;
- (2) each attorney or agent who prepares or prosecutes the application; and
- (3) every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application." 37 C.F.R. § 1.56(c).

NOTE: The "duty as described in § 1.56 will be met so long as the information in question was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98 before issuance of the patent." Notice of January 9, 1992, 1135 O.G. 13 -25 at 17.

WARNING: "No information disclosure statement may be filed in a provisional application." 37 C.F.R. § 1.51(b).

### List of Sections Forming Part of This Information Disclosure Statement

The following sections are being submitted for this Information Disclosure Statement:

(check sections forming a part of this statement: discard unused sections  
and number pages consecutively)

1. ☒ Preliminary Statements
2. ☒ FORMS PTO/SB/08A and 08B (formerly FORM PTO-1449)
3. ☐ Statement as to Information Not Found in Patents or Publications
4. ☐ Identification of Prior Application in Which Listed Information Was Already Cited and for Which No Copies Are Submitted or Need Be Submitted
5. ☐ Cumulative Patents or Publications
6. ☒ Copies of Listed Information Items Accompanying This Statement
7. ☐ Concise Explanation of Non-English Language Listed Information Items
  - 7A. ☐ EPO Search Report
  - 7B. ☐ English Language Version of EPO Search Report
8. ☐ Translation(s) of Non-English Language Documents
9. ☒ Concise Explanation of English Language Listed Information Items (Optional)
10. ☒ Identification of Person(s) Making This Information Disclosure Statement

(complete the following, if appropriate)

Sections \_\_\_\_\_, respectively, have been continued on ADDED PAGE(S).

NOTE: "Once the minimum requirements are met, the examiner has an obligation to consider the information." Notice of April 20, 1992 (1138 O.G. 37-41, 37).

## **Section 1. Preliminary statements**

Applicants submit herewith patents, publications or other information, of which they are aware that they believe may be material to the examination of this application, and in respect of which, there may be a duty to disclose.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 C.F.R. 1.97(g)), an admission that the information cited is, or is considered to be, material to patentability, or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

## Section 6. Copies of Listed Information Items Accompanying This Statement

*NOTE: 37 C.F.R. 1.98(a)(2) requires that any information disclosure statement filed under § 1.97 shall include: "A legible copy of: (i) Each U.S. and foreign patent; (ii) Each publication or that portion which caused it to be listed; and (iii) All other information or that portion which caused it to be listed, except that no copy of a U.S. patent application need be included . . ."*

*NOTE: The wording in § 1.98(a)(2)(iii) makes it clear that the requirement to submit a copy of each item of information listed in an information disclosure statement does not apply to the citation of a U.S. patent application. Notice of January 9, 1992, 1135 O.G. 13-25, at 14.*

Legible copies of all items listed in Forms PTO/SB/08A and 08B (formerly Form PTO-1449) accompany this information statement.

*(complete the following, if applicable)*

- ☐ Exception(s) to above:
  - ☐ Items in prior application, from which an earlier filing date is claimed for this application, as identified in Section 4.
  - ☐ Cumulative patents or publications identified in Section 5.

## **Section 9. Concise Explanation of English Language Listed Information Items (OPTIONAL)**

**NOTE:** *"Applicants may, if they wish, provide a concise explanation of why English-language information is being submitted and how it is understood to be relevant. Concise explanations are helpful to the Office, particularly where documents are lengthy and complex and applicant is aware of a section that is highly relevant to patentability or where a large number of documents are submitted and applicant is aware that one or more are highly relevant to patentability." Notice of April 20, 1992 (1138 O.G. 37-41, 38).*

International Publication No. WO 02/055343, published on July 18, 2002 to Curry, et al., teaches an airbag for mounting in the bumper of a motor vehicle. The airbag can have an up-side-down "L" shape or a cylindrical shape. Further, multiple bags can be combined within one system. The airbag is configured to cover substantially the width of the vehicle upon deployment and also provide protection to the occupant of a struck vehicle in the event the occupant is partially expelled from the struck vehicle in the direction of the bag. The airbag is combined with an inflation, collision sensor and an electronic control unit to form the airbag system.

British Patent No. 2,368,565, published on May 8, 2002 to Moore, describes a vehicle front impact arrangement that comprises a fender element, or bumper, mounted upon a slide mechanism in order to be displaceable between a displaced position which is above a vehicle's approach angle profile and a normal position where a substantially broader collision front area is provided for the vehicle in order to reduce the leg bend of a pedestrian in collision with the vehicle.

German Patent No. 10,031,525, issued on January 10, 2002 to Sinnhuber, discloses a bumper in which the bumper has at least one gas-filled airbag chamber, coupled to a second airbag chamber, positioned below the bumper in the vicinity of the front spoiler of the automobile, which is normally collapsed in a folded state and is inflated by the gas displaced from the first airbag chamber in the case of a frontal impact. A series of gas-filled airbag chambers can lie next to one another along the length of the bumper, covered by an elastic skin defining the bumper contour.

International Publication No. WO 01/98117, published on December 27, 2001 to Mattes presents an invention to determine whether a collision with the front of a vehicle was caused by a pedestrian. Two decisive conditions are thus generated and only when both conditions are fulfilled is a pedestrian collision accepted. The first decisive condition is generated by a comparison of pressures or deformations measured by a sensor on the front bumper and a sensor in the region of the front engine bonnet edge with reference data typical for a collision with a pedestrian. The second decisive condition is generated by comparison of the speed and/or

acceleration changes caused by the collision with reference data typical for a collision with a pedestrian.

U.S. Patent No. 6,329,910, issued on December 11, 2001 to Farrington, provides a vehicle impact detection apparatus that has a sensor for sensing impact of an object against a vehicle. A safety device, such as an external airbag or a deployable hood is actuatable on receipt of a firing signal from the sensor. The vehicle impact detection apparatus has a magnetostrictive sensor and a stress-conducting member in the form of an elongate metal bar in the lower air dam area of the bumper of the vehicle. The signal from the sensor is analyzed to determine information about the impact.

International Publication No. WO 01/28818, published on April 26, 2001 to Staines, et al., teaches a vehicle bumper arrangement for use on the front part of a vehicle. The vehicle bumper arrangement comprises a main bumper extending horizontally across the front of the vehicle and an auxiliary bumper extending across the front of the vehicle at a level below that of the main bumper. The main bumper has a deformable region extending forward of the auxiliary bumper, so that in the event of a pedestrian collision, the deformable region collapses and the principal force of the collision exerted on the main bumper occurs at a point that is rearward of the auxiliary bumper, thus reducing the risk that the pedestrian's leg will become caught beneath the vehicle.

German Patent No. 19,934,141, issued on February 1, 2001 to Leng, describes a vehicle with an energy-absorbent structure and with a spoiler made in one piece with the bumper or fastened thereto. To improve protection of pedestrians, it is proposed that spoiler be limited in its deflection lengthwise of the vehicle by a support mounted on the vehicle, with support being located a radial distance behind spoiler.

European Patent No. 1,046,546, published on October 25, 2000 to Mark, discloses a bumper designed to have optimal mechanical properties which improve pedestrian protection. The bumper essentially consists of a cover and an absorber arranged beneath the cover and the mounting elements to connect a cover and absorber to the vehicle's body. The stiffness of the lower portion of the bumper in its mounted position is increased relative to the upper portion of the bumper. By making the lower portion of the bumper which is directed forwardly into the

direction of driving stiffer, the impact force in case of collision with a pedestrian is concentrated on the lower portion of the bumper.

German Patent No. 19,806,153, issued on August 19, 1999 to Niggeman, presents an airbag mounted in a motor vehicle bumper with ultrasonic sensors to detect obstructions, which uses the data to trigger the airbag. Obstructions can also be detected using video sensors. The airbag's air sack is made of a fabric material.

U.S. Patent No. 4,249,632, issued on February 10, 1981 to Lucchini, provides a device to protect the pedestrians involved in a collision with a vehicle. Said device consists of a mechanism to raise the rear part of the bonnet. Said mechanism can be activated by a sensor installed in the front zone of the bumpers, which detects the collision with the pedestrian. When the collision is detected, the mechanism proceeds to raise the bonnet from a rest position to a position of impact, a condition that according to the applicant has the purpose of reducing the potential contact between the head of the pedestrian and the windscreen. Among the possible solutions of mechanisms aimed at raising the rear part of the bonnet, is also mentioned an air bag, the cover of which is kept deflated in the part immediately under the rear part of the bonnet.

U.S. Patent No. 3,784,244, issued on January 8, 1974 to Emi, teaches a pedestrian life saving apparatus for a motorcar. The apparatus includes a mounting frame secured to the underside of a chassis and a bumper of a motorcar for mounting a mechanisms of the apparatus, a panel attached to the front portion of a bumper of the car through a cushioning means. In case of an collision with a pedestrian, a slidable cushioning means is projected forward of the bumper by the force of a spring.

**Section 10. Identification of Person(s) Making This Information Disclosure Statement**

The person making this statement is

*(check each applicable item)*

- (a) ☐ the inventor(s) who signs below

\_\_\_\_\_  
SIGNATURE OF INVENTOR

\_\_\_\_\_  
*(type name of inventor who is signing)*

- (b) ☐ an individual associated with the filing and prosecution of this application (37 C.F.R. § 1.56(c))

\_\_\_\_\_  
SIGNATURE OF INVENTOR

\_\_\_\_\_  
*(type name of inventor who is signing)*

- (c) ☒ the practitioner who signs below on the basis of the information:

*(check each applicable item)*

- ☐ supplied by the inventor(s).  
☐ supplied by an individual associated with the filing and prosecution of this application. (37 C.F.R. § 1.56(c))  
☒ in the practitioner's file.

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\_\_\_\_\_  
SIGNATURE OF PRACTITIONER

John S. Egbert

\_\_\_\_\_  
*(type or print name of practitioner)*

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